December 8, 2004

The Honorable Michael Powell
Chairman
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

RE: Air-Ground Services; WT Docket No. 03-103

Dear Chairman Powell:

I am writing to address what appears to have emerged as an important issue in the above-referenced docket. In our discussions with the Commission concerning the opportunity for the Commission to adopt rules permitting competition in the air-to-ground ("ATG") band, there seemingly remains a question as to whether shared use of the ATG band by two competitors would entail costs or technical constraints so great as to outweigh the expected benefits of competition. The simple and clear answer is "no," as we believe has been amply demonstrated in the record and in our various technical discussions with the Staff.

AirCell has devoted very substantial engineering resources and effort to the development of a network design and plan for a full broadband, air-to-ground system for commercial airlines. AirCell has worked closely with Boeing engineers on the two-licensee technical proposal and has also vetted it with a number of large wireless carriers.

As part of that effort we carefully evaluated the costs associated with the sharing plan in order to ensure that it could be constructed in a cost-effective manner from commercially available, off-the-shelf equipment. Attached is a letter from one of AirCell's engineering consultants that more specifically addresses this issue. In summary, it is our finding and conclusion that the incremental costs required to implement sharing of the ATG spectrum represent a negligible increase over the cost to a single network provider.

These small incremental costs are not a disincentive for my company to provide competitive ATG service. Indeed, I would be surprised if any potential entrant in the ATG market would view costs of this magnitude to be a deterrent to providing ATG service.

We are absolutely convinced that the AirCell/Boeing two licensee proposal will enable full broadband deployment with no degradation of bandwidth, capacity, speed, or range of services in comparison to the single, monopoly network proposed by Verizon Airfone.

Furthermore, AirCell is committed to making a very significant further investment to secure an ATG license at auction and to build out a nationwide network in order to have the competitive opportunity to provide service to passengers onboard thousands of aircraft. Rest assured we would not be doing this unless we had complete confidence that the service we provide will be exactly what the airlines and their passengers expect. Anything else would be folly.

We also believe strongly that any expressed concern about possible constraints on hypothetical future technologies is misplaced – particularly as a basis for thwarting a decision to foster true competition *now*. AirCell is confident that future improvements to broadband technologies that can operate in the relatively narrow, 4 MHz band can be accommodated in a dual license environment. Obviously, future higher bandwidth technologies, if and as they emerge, would be candidates for and would need to find a home in possible future allocations of additional air-to-ground frequencies.

It is clear that the overwhelming majority of parties commenting in this proceeding want the Commission to structure the ATG industry in a competitive fashion. The technical record supports the finding that the FCC can have full broadband communications *and* competition for the benefit of the airlines and their passengers.

Therefore, AirCell continues to urge the FCC to reject any auction or licensing proposal that includes a single 4 MHz or 3 MHz broadband ATG license. Instead, the FCC should only consider auction or licensing options that will ensure competition, such as the AirCell-Boeing two-licensee proposal.

Finally, on a related issue, the FCC should not allow ancillary terrestrial use of the ATG band given the serious concerns raised by many parties in this proceeding. At a minimum, the FCC should not make any final decisions on ancillary terrestrial use of this band at this stage of the proceeding. Instead, it should develop a further record on the many interference, competition, and auction-related concerns raised by the parties.

Please do not hesitate to contact me directly if you have any questions about this subject matter or would like additional information from our engineering staff concerning the costs of implementing competition in the ATG band.

Sincerely,

/s/ Jack Blumenstein

Jack Blumenstein
Chairman and CEO

Enclosure

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December 8, 2004

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street NW, Room TW-A325
Washington, DC 20554

Re: Docket 03-103
Commission's Rules to Benefit the Consumers of Air-Ground Telecommunications Services

Dear Ms Dortch:

Saroka and Associates submits these comments on the Commission's examination of the rules governing the provision of air-ground services on commercial aircraft.

Saroka and Associates is a telecommunications consulting firm, and has been engaged by AirCell, Inc. to support various activities associated with the development of their technology, engineering and business plans for development of competitive commercial air-to-ground communications capabilities. The undersigned has 30 plus years in various aspects of the telecommunications business, spanning product design and manufacturing and network systems design, implementation and operations. Responsibilities have included responsibilities for all network engineering and operations activities for GTE Mobilnet, and responsibility for all engineering activities for GTE Airfone. This background provides a solid basis for analysis of some issues that have been raised in this proceeding.

In particular, there may be concerns that the benefits of competition may be outweighed by the costs associated with adopting a competitive structure, and by potential constraints on future technical options for technology employed in such a competitive structure.

The Commission is encouraged to consider the realities of both the costs and the potential constraints, lest it be concluded that the very real benefits of competition are outweighed by entirely speculative costs and constraints. With respect to the implementation of systems by two carriers, each carrier's cost will be essentially the same as that of a single carrier monopolizing the air-to-ground band. One carrier will use horizontally polarized antennas rather than vertically polarized antennas, but the costs of this difference are not material in relation to the overall costs of deploying a nationwide network. In addition, there will be an initial cost of engineering personnel engaged in coordinating network design parameters between the two systems to assure that interference is not created between systems. This will amount to a modest number of man-weeks of effort, a cost that will again be insignificant in the context of overall design and implementation costs of a nationwide network.

Broadband technologies suitable for the air-to-ground environment and the available spectrum are limited, and cdma2000 1xRTT EVDO has been identified by all participants as the best available technology for use in the air-ground spectrum. This technology is backwards compatible with all of the various CDMA permutations back to IS-95, and can reasonably be expected to be forward compatible with future air

interface permutations. Under a monopoly scenario, we would expect the carrier to be inclined to leverage such ongoing improvements as the primary source of technology innovation in the air-ground band, since development of a more effective, air-ground-specific technology is likely to be cost-prohibitive and impractical. (It may also be worth noting that, in a single-carrier scenario, there is likely to be limited incentives to identify, develop and implement technology innovations in the absence of any significant competitive pressures.)

The spectrum sharing approach before the Commission is in fact a technology innovation that effectively doubles the broadband capacity of the air-ground spectrum as well as providing the basis for licensing two competitive carriers. The trade-offs related to technology innovation therefore can be summarized as:

- single carrier license – limited incentives to innovate, but relative freedom to do so
- two carrier licenses – an initial doubling of spectrum capacity, a competitive environment that will drive implementation of innovations, and freedom to adopt innovations that continue to emerge in cdma2000 technology.

In summary, the advantage of the certain technology innovations under the two-carrier scenario is likely to outweigh the entirely speculative technology innovations that might be implemented by a monopoly carrier. The cost of a network implemented under a two-carrier scenario will not be significantly different from those that would be incurred by a monopoly carrier. A Commission decision to implement a two-carrier licensing approach may clearly be justified when consideration is given to the balance of competitive benefits versus the costs of implementation and potential restrictions on technology innovation.

Respectfully,

Grant Saroka
Principal Consultant
Saroka & Associates, LLC